

What Are Missed in Intelligence Studies

If Newton had used Pascal's probability thinking and language, could he have established classical physics? Without classical physics, there would be no base to develop quantum physics.

John von Neumann suggested some valuable mathematical theories for quantum physics. However, he was terribly wrong in his weather control plan (See Freeman Dyson's *Birds and Frogs*). What languages to use and think, are important.

Neurosciences only make progresses in some animal level intelligence: vision, motion, emotion, etc. They do not understand the human specific intelligences, such as the principles and mechanisms behind the development of natural languages, philosophical opinions, mathematics axiom systems, and sciences, etc.

To study human intelligence, I propose three research plans:

- 1) With Go game, such as: to study what factors constrains human intelligence in Go games, etc., and develop testing procedures for computer Go products [*].
- 2) With natural languages, such as: what language factors are needed to study human specific intelligence. Also, a middle-level test for natural language processing is needed to measure the current status of artificial intelligence. Turing Test is misleading.
- 3) Study intelligence in life systems including neural systems.

The semantics of irrational numbers is a key to look into these issues. Deep learning does not provide such important insights.

However, without clarifying the sophism and misleading in brain and intelligence studies, including Leukotomy and Turing Test, there is no fair environment to study human specific intelligence.

Without fair environment and fair allocation of research resources, I am unable to do further research.

[*] Other people also could think of what factors constrains human intelligence in financial trading, etc., to see any difference from those in Go

game.

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